

ABSTRACT

1 **[0050]** A reflector structure in a liquid crystal display having light condensing effect
2 comprises mainly an active device substrate, a condenser having diffraction or refraction
3 effect being formed above the substrate, a spacing layer being formed above and covering
4 the condenser, and a reflective unit being formed above the spacing layer. The condenser
5 can be a holographic diffraction unit, micro prisms or micro lens unit. It can be on a TFT
6 substrate or a color filter. The color filter can be located at the same or opposite side with
7 the TFT substrate. The spacing layer may be an over coat layer, a color filter, a color
8 filter and an over coat layer on the color filter, or a substrate. The reflective unit also has
9 various structures, reflective angles, and reflective effects. The invention utilizes the
10 condenser to collect light. 60% to 95% of unused backlight is collected. The backlight
11 gain is over 120% to 400%, thereby greatly saving the power consumption for the
12 backlight source.